What is claimed is:

1. A moving picture decoding apparatus inputting a compressed image and decoding an image based on a prediction image comprising:

a memory for storing a reference image for generating the prediction image;

an input section for inputting indication information indicating a deformation method and inputting the compressed image; and

a prediction image generation section, including a processing section for performing deformation processes corresponding to a plurality of deformation methods, for processing the reference image in the memory with a deformation process corresponding to the deformation method indicated by the indication information inputted to the input section so as to generate the prediction image.

2. The moving picture decoding apparatus of claim 1, wherein the processing section generates the prediction image based on one of a parallel translation transform method, an affine transform method and a perspective transform method.

3. The moving picture decoding apparatus of claim 1 further comprising:

a plurality of memories, each memory corresponding to at least one of the plurality of deformation methods and storing the reference image for generating the prediction image;

wherein the processing section generates the prediction image based on the reference image stored in one of the plurality of memories corresponding to one of the plurality of deformation methods.

4. A moving picture decoding apparatus inputting a compressed image and decoding an image based on a prediction image comprising:

a plurality of memories, each memory corresponding to at least one of a plurality of deformation methods and storing a reference image for generating the prediction image;

an input section for inputting memory information indicating one of the plurality of memories to be used and inputting the compressed image; and

a prediction image generation section for selecting the one of the plurality of memories indicated by the memory information inputted to the input section, and generating the prediction image based on a reference image stored in a selected memory.

5. The moving picture decoding apparatus of claim 4, wherein the prediction image generation section includes a processing section performing deformation processes based on the plurality of deformation methods,

wherein the each of the plurality of memories corresponds to a deformation method, and

wherein the processing section generates the prediction image by performing a deformation process based on the deformation method corresponding to the selected memory.

6. The moving picture decoding apparatus of claim 5, wherein the processing section generates the prediction image based on one of a parallel translation transform method, an affine transform method and a perspective transform method.

7. A moving picture decoding apparatus inputting a compressed image and decoding an image based on a prediction image comprising:

a memory for storing a reference image for generating the prediction image; and

a prediction image generation section for inputting indication information indicating one of a plurality of deformation methods used for generating the compressed image and inputting the compressed image, and generating

the prediction image based on the reference image in the memory and the deformation method indicated by the indication information.

8. The moving picture decoding apparatus of claim 7, wherein the prediction image generation section generates the prediction image based on one of a parallel translation transform method, an affine transform method and a perspective transform method.

9. The moving picture decoding apparatus of claim 7 further comprising:

a plurality of memories, each memory corresponding to at least one of the plurality of deformation methods and storing the reference image for generating the predication image;

wherein the prediction image generation section generates the prediction image based on the reference image stored in one of the plurality of memories corresponding to the at least one of the plurality of deformation methods.

10. A moving picture decoding method inputting a compressed image and decoding an image based on a prediction image comprising:

storing a reference image for generating the prediction image;

inputting indication information indicating a deformation method and inputting the compressed image; and

generating the prediction image, the generating including processing for performing deformation processes corresponding to a plurality of deformation methods, by processing the reference image stored through the storing with a deformation process corresponding to the deformation method indicated by the indication information inputted through the inputting.

11. The moving picture decoding method of claim 10, wherein the prediction image is generated in the processing based on one of a parallel translation transform method, an affine transform method and a perspective transform method.

12. The moving picture decoding method of claim 10 further comprising:

storing the reference image for generating the prediction image in a plurality of memories, each memory corresponding to at least one of the plurality of deformation methods;

wherein the prediction image is generated in the processing based on the reference image stored in one of the plurality of memories corresponding to the at least one of the plurality of deformation methods.

13. A moving picture decoding method inputting a compressed image and decoding an image based on a prediction image comprising:

storing a reference image for generating the prediction image in a plurality of memories corresponding to at least one of a plurality of deformation methods;

inputting memory information indicating one of the plurality of memories to be used and inputting the compressed image; and

selecting the one of the plurality of memories indicated by the memory information inputted through the inputting, and generating the prediction image based on the reference image stored in a selected memory.

14. The moving picture decoding method of claim 13, wherein the generating includes processing for performing deformation processes based on the plurality of deformation methods;

wherein each of the plurality of memories corresponds to a deformation method; and

wherein prediction image is generated in the processing by performing a deformation process based on the deformation method corresponding to the selected memory.

15. The moving picture decoding method of claim 14, wherein the prediction image is generated in the processing based on one of a parallel translation transform method, an affine transform method and a perspective transform method.

16. A moving picture decoding method inputting a compressed image and decoding an image based on a prediction image comprising:

storing a reference image for generating the prediction image; and

inputting indication information indicating one of a plurality of deformation methods used for generating the compressed image and inputting the compressed image, and generating the prediction image based on the reference image stored through the storing and the deformation method indicated by the indication information.

17. The moving picture decoding method of claim 16, wherein the prediction image is generated in the generating based on one of a parallel translation

transform method, an affine transform method and a perspective transform method.

18. The moving picture decoding method of claim 16 further comprising:

storing the reference image for generating the prediction image in a plurality of memories, each memory corresponding to at least one of the plurality of deformation methods;

wherein the prediction image is generated in the generating based on the reference image stored in one of the plurality of memories corresponding to the at least one of the deformation methods.

19. A moving picture prediction system for predicting a moving picture to be implemented in at least one of an encoder and a decoder, the moving picture prediction system comprising:

a plurality of memories for storing picture data for reference to be used for prediction, the plurality of memories corresponding to at least one of deformation methods; and

a prediction picture generation section for receiving a parameter to be used for the prediction of a picture segment to be predicted and for generating a predicted picture using the picture data stored in one of

the plurality of memories used for the picture segment to be predicted based upon one of the deformation methods corresponding to the one of the plurality of memories.

20. A moving picture decoding apparatus using prediction of a moving picture comprising:

a plurality of memories for storing picture data for reference for prediction, the plurality of memories corresponding to at least one of deformation methods; and

a prediction picture generation section for receiving a parameter for the prediction of a picture segment that is predicted and for generating a predicted picture using the picture data stored in one of the plurality of memories for the picture segment that is predicted based upon one of the deformation methods corresponding to the one of the plurality of memories.

21. A moving picture decoding apparatus using prediction of a moving picture comprising:

a plurality of memories for storing picture data for reference for prediction, the plurality of memories corresponding to at least one of deformation methods; and

a prediction picture generation section for receiving a parameter for the prediction of a picture segment that is predicted and for generating a predicted picture using the picture data stored in one of the

plurality of memories for the picture segment that is predicted based upon one of the deformation methods corresponding to the one of the plurality of memories, wherein the correspondence is identified by said parameter.

22. A moving picture decoding method using prediction of a moving picture comprising:

storing picture data for reference for prediction into a plurality of memories corresponding to at least one of deformation methods;

receiving a parameter for a prediction of a picture segment that is predicted; and

generating a predicted picture using the picture data stored in one of the plurality of memories for the picture segment that is predicted based upon one of the deformation methods corresponding to the one of the plurality of memories.

23. A moving picture decoding method using prediction of a moving picture comprising:

storing picture data for reference for prediction into a plurality of memories corresponding to at least one of deformation methods;

receiving a parameter for a prediction of a picture segment that is predicted; and

generating a predicted picture using the picture data stored in one of the plurality of memories for the picture segment that is predicted based upon one of the deformation methods corresponding to the one of the plurality of memories, wherein the correspondence is identified by said parameter.